

AMENDMENTS TO THE CLAIMS

1. (Original): An electroless copper plating solution comprising copper ion, a complexing agent for copper ion, a reducing agent for copper ion and a pH adjusting agent,

wherein said reducing agent for copper ion is glyoxylic acid or a salt thereof,

said pH adjusting agent is potassium hydroxide, and

said electroless copper plating solution contains at least one member selected from the group consisting of metasilicic acid, a salt of metasilicic acid, germanium dioxide, a salt of germanic acid, phosphoric acid, a salt of phosphoric acid, vanadic acid, a salt of vanadic acid, stannic acid and a salt of stannic acid in an amount of 0.0001 mol/L or more.

2. (Original): An electroless copper plating solution comprising copper ion, a complexing agent for copper ion, a reducing agent for copper ion and a pH adjusting agent,

wherein said reducing agent for copper ion is glyoxylic acid or a salt thereof,

said pH adjusting agent is potassium hydroxide, and

said electroless copper plating solution contains at least one member selected from the group consisting of a primary amine, a secondary amine and methanol in an amount of 0.001 mol/L or more.

3. (Original): The electroless copper plating solution according to Claim 1 or 2, wherein said electroless copper plating solution further contains at least one member selected from the group consisting of 2,2'-bipyridyl, 1,10-phenanthroline,

2,9-dimethyl-1,10-phenanthroline, polyethylene glycol and polypropylene glycol.

4. (Amended): The electroless copper plating solution according to Claim 1 or 2, wherein said electroless copper plating solution further contains at least one of sodium ion, iron ion, nitrate ion and nitrite ion each in an amount of 10 mg/L or less.

5. (Amended): An electroless copper plating process using the electroless copper plating solution according to Claim 1 or 2,

which comprises continuously circulating and filtering the plating solution after a preparation of [[a]] the plating bath but prior to a plating treatment of a body to be plated.

6. (Amended): The electroless copper plating process using the electroless copper plating solution according to Claim 5,

wherein a period of time T required for continuously circulating and filtering the plating solution after [[a]] the preparation of [[a]] the plating bath but prior to [[a]] the plating treatment of [[a]] the body to be plated is [[a]] the period of time satisfying:

$$Y \cdot T > 3V$$

wherein V denotes a quantity of the plating solution and Y denotes a quantity of circulation per unit time.

7. (Amended): A process for producing a circuit board using the electroless copper plating solution according to Claim 1 or 2,

which comprises continuously circulating and filtering the plating solution after a preparation of [[a]] the plating bath but prior to a plating treatment of a base board.

8. (Amended): The process for producing a circuit board using the electroless copper plating solution according to Claim 7,

wherein a period of time T required for continuously circulating and filtering the plating solution after the preparation of the plating bath but prior to the plating treatment of the base board is the period of time satisfying:

$$Y \cdot T > 3V$$

wherein V denotes a quantity of the plating solution and Y denotes a quantity of circulation per unit time.

9. (Original): A process for producing a circuit board, which comprises:

forming a copper film by the use of the electroless copper plating solution according to Claim 1 or 2, and thereafter,

electroplating by using said copper film as a seed film for electro plating.